REMARKS AND RESPONSES

Office Action's rejection statement on claims 1-2, 7-14 and 18-19, under 35 U.S.C. § 102(b) as being anticipated by Ito, has three typographical errors "Lee" (line 2, 3 and 6 of the paragraph) noted by the Applicant. Therefore, it is respectfully requested that the term "Lee" be indicated as "Ito". For purposes of responding this Office Action, the Applicant has assumed those typographical errors have been indicated.

Claims 1, 11-14 and 18-19 have been amended and Claims 1-19 remain pending in the present application. Support for the amendments is found in the specification and claims as filed. Accordingly, the amendments do not constitute the addition of new matter. Reconsideration of the application in view of the foregoing amendments and following comments is respectfully requested.

Claim Rejections - 35 U.S.C. § 102

The Office Action rejected claims 1-2, 7-14 and 18-19 under 35 U.S.C. §102(b) as being anticipated by Ito (US 5,558,155).

The Office Action rejected claims 1-3, 7-14 and 18-19 under 35 U.S.C. §102(b) as being anticipated by Lee (US 6,315,032).

Of rejected claims, only claims 1 and 11 are independent.

> "A claim is anticipated **only if each and every element as set forth in the claim is found**, either expressly or inherently described, in a single prior art reference." Verdegaal Bros. V. Union Oil Co. of California, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053(Fed. Cir. 1987). "The identical invention must be **shown in as complete detail** as is contained in the ...claim." Richardson v. Suzuki Motor Co., 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989). (MPEP 2131)

As defined by the amended **claim 1**, a cooling fin structure is connected to a substrate with a welding flux and comprises a substrate and at least one thermally conductive sheet. Each of the thermally conductive sheets is bent to form a heat radiation part and a welding part. The welding part is formed with **a vacant region**. The **welding flux** is disposed between the substrate and the welding part, and the vacant region exposes the squeezed welding flux underneath.

As defined by the amended **claim 11**, a fin assembly comprises a substrate and a plurality of cooling fins welded thereon. Each of the cooling fins is bent towards one direction to form a heat radiation part and a welding part. The welding part is welded on a

surface of the substrate to connect the cooling fins to the substrate. The welding part is formed with **a vacant region** such that part area of the surface of the substrate, between adjacent two of the cooling fins, is not covered by the cooling fins.

However, **Ito** fails to disclose a cooling fin structure or a fin assembly, as recited by the amended claims 1 and 11, especially for the vacant region of the welding part. In particular, Ito's intended purpose is to **accurately stack** the fins on a flat plate without being affected by the brazing material in the brazing process (see col. 2, lines 32-45 and col. 5, lines 65-67 of Ito). Ito also discloses a cooling apparatus having fins (13) being formed with notches and projections. When the fins (13) are stacked on the substrate (12), the curved projection (13f) engages with the semicircular notch (13d) of the next fin, and edges faces of the fins **pressed and punched out** contact each other, so that positioning can be carried out in both the longitudinal and lateral directions (see FIG. 2 and col. 5, lines 44-65 of Ito). Accordingly, fin's lower edge sections would be expected to engages with each other **closely** by projections being fitting into notches and **almost no vacant regions** of lower edge sections are available to accommodate the brazing material, **otherwise** fins cannot be accurately and firmly stacked such that positioning of fins would be affected by the brazing material in the brazing process.

Further, **Lee** fails to disclose a cooling fin structure, as recited by the amended claim 1, especially for the welding flux and the vacant region of the welding part. In particular, Lee discloses a heat sink (3) including a base plate (31) and a plurality of fins (30). Each Fin (30) includes a vertical wall (304) and a connecting portion in the form of a plurality of tabs (302) extending from opposite sides of the vertical wall (304). The tabs (302) of the fins (30) are securely with the base plate (31) by **punching** whereby the staggered tabs (302) of adjacent fins (30) are engaged with each other. See FIGs. 4 & 5 and col. 3, lines 34-45 of Lee. Therefore, **no** welding flux is disclosed and necessary in Lee's heat sink. Almost **no** vacant region of fins' connecting portions, between two adjacent fins, is not covered by the cooling fins due to engagement of staggered tabs (302), as best illustrated in FIG. 5 of Lee.

Lee also fails to disclose a fin assembly, as recited by the amended claim 11, especially for the vacant region of the welding part and the feature "each of the cooling fins is bent towards one direction to form a heat radiation part and a welding part". In particular, Lee discloses a heat sink (3) including a base plate (31) and a plurality of fins (30). Each Fin (30) includes a vertical wall (304) and a connecting portion in the form of a plurality of tabs (302) extending from opposite sides of the vertical wall (304). The tabs (302) of the fins (30) are securely with the base plate (31) by punching whereby the staggered tabs (302) of

adjacent fins (30) are engaged with each other. See FIGs. 4 & 5 and col. 3, lines 34-45 of Lee. Thus, tabs (302) of the connecting portion extend towards **two opposite** directions, rather than extend towards one direction. Almost **no** vacant region of fins' connecting portions, between two adjacent fins, is not covered by the cooling fins due to engagement of staggered tabs (302), as best illustrated in FIG. 5 of Lee.

Therefore, neither **Ito** nor **Lee** teaches or suggests all features, as expressly recited by the amended claims 1 and 11. Accordingly, the novel features of claims 1 and 11 produce new and unexpected results and hence are unobvious and patentable over these references.

In addition, insofar as claims 2-3 and 7-10 depend from claim 1 and claims 12-14 and 18-19 depend from claim 11. These claims add further limitations thereto. Thus, claims 2-3, 7-10, 12-14 and 18-19 of the present application are also novel and unobvious over the prior art of record. Accordingly, Applicant respectfully submits that the rejections under 35 U.S.C. §102(b) should be withdrawn.

Reconsideration and withdrawal of this rejection is respectfully requested.

Conclusions

For all of the above reasons, applicants submit that the specification and claims are now in proper form, and that the claims define patentably over prior arts. Therefore applicants respectfully request issuance for this case at the Office Action's earliest convenience. A Notice of Allowance is therefore respectfully requested.

If the Examiner has any questions concerning the present amendment, the Examiner is kindly requested to contact the undersigned at (408) 749-6903. If any other fees are due in connection with filing this amendment, the Commissioner is also authorized to charge Deposit Account No. 50-0805 (Order No. JLINP181/TLC). A duplicate copy of the transmittal is enclosed for this purpose.

Respectfully submitted,
MARTINE PENILLA & GENCARELLA, LLP

Albert S. Penilla, Esq.
Reg. No. 39,487

710 Lakeway Drive, Suite 200
Sunnyvale, CA 94085
Telephone: (408) 749-6900
Facsimile: (408) 749-6901
Customer No: 25920